In the Claims:

Claims 1-31 (canceled)

32. (new) A system for stereoscopic viewing, comprising

(a) a display operable to present, at a given time, alternating left and right image elements of left and right images across said display;

(b) a barrier positioned between said display and a viewer, said barrier comprises a plurality of pixels individually switchable to be transparent or to be opaque, said barrier operable to present at said given time a plurality of alternating transparent and opaque barrier elements, each transparent element comprises a plurality of horizontally contiguous pixels each switched to be transparent, and each opaque element comprises a plurality of horizontally contiguous pixels each switched to be opaque;

(c) an eye tracking system operable to determine distances and lateral positions of left and right eyes of a viewer with respect to said display; and

(d) a controller operable to calculate and command positions for presentation of said left and right image elements on said display and to calculate and command positions for presentation of said transparent and opaque barrier elements of said barrier, said calculated positions being such that left image elements displayed on said display are visible through said transparent elements of said barrier to said left eye of said viewer and are blocked by said opaque elements of said barrier from being seen by said right

eye of said viewer, and right image elements displayed on said display are visible to said right eye of said viewer through said transparent elements of said barrier and are blocked by said opaque elements of said barrier from being seen by said left eye of said viewer;

wherein said controller is operable to respond to a detected change in lateral position of a viewer with respect to said display by commanding switching of a pixel selected from among a plurality of pixels forming a one of said transparent barrier elements from being transparent to being opaque while maintaining transparency of other pixels forming said one of said transparent barrier elements.

33. (new) The system of claim 32, wherein said controller is further operable to respond to said detected change in lateral position of a viewer by commanding switching of an opaque pixel adjacent to said one of said transparent barrier elements from being opaque to being transparent.

34. (new) The system of claim 32, wherein said controller is further operable to respond to a detected change in lateral position of a viewer by switching from transparent mode to opaque mode selected pixels from a plurality of said transparent barrier elements, while maintaining transparency of other pixels forming each of said plurality of transparent barrier elements.

35. (new) The system of claim 32, wherein said controller is further operable to respond to a detected change in lateral position of a viewer by switching an opaque pixel adjacent to each of a plurality of said transparent barrier elements from being opaque to being transparent.

36. (new) The system of claim 32, wherein said controller is further operable to respond to a detected increase in distance of a viewer from said display by reducing the number of horizontally contiguous transparent barrier pixels forming at least one of said transparent barrier elements.

37. (new) A system for stereoscopic viewing, comprising

(a) a display operable to present, at a given time, alternating left and right image elements of left and right images across said display;

(b) a barrier positioned between said display and a viewer, said barrier comprises a plurality of pixels individually switchable to be transparent or to be opaque, said barrier operable to present at said given time a plurality of alternating transparent and opaque barrier elements, each transparent element comprises a plurality of horizontally contiguous pixels each switched to be transparent and each opaque element comprises a plurality of horizontally contiguous pixels each switched to be opaque;

(c) an eye tracking system operable to determine distances and lateral positions of left and right eyes of a viewer with respect to said display; and

(d) a controller operable to calculate and command positions for presentation of said left and right picture elements on said display and to calculate and command positions for presentation of said transparent and opaque elements of said barrier, said calculated positions being such that left image elements displayed on said display are visible to said left eye of said viewer through said transparent elements of said barrier and are blocked by said opaque elements of said barrier from being seen by said right eye of said viewer, and right image elements displayed on said display are visible through said transparent elements of said barrier to said right eye of said viewer and are blocked by said opaque elements of said barrier from being seen by said left eye of said viewer;

wherein said system is operable to respond to a detected increase in distance of a viewer from said display by reducing the number of horizontally contiguous transparent barrier pixels forming one of said transparent barrier elements.

38. (new) The system of claim 37, wherein said system is operable to respond to a detected increase in distance of a viewer from said display by reducing the number of contiguous barrier pixels forming each of a plurality of said transparent elements of said barrier.

39. (new) The system of claim 37, wherein said system is further operable to respond to a detected decrease in distance of a viewer from said

display by increasing the number of contiguous barrier pixels forming a plurality of said transparent elements.

40. (new) The system of claim 37, wherein said controller is operable to respond to a detected change in lateral position of a viewer with respect to said display by commanding switching of a pixel selected from among a plurality of pixels forming a one of said transparent barrier elements from being transparent to being opaque while maintaining transparency of other pixels forming said one of said transparent barrier elements.